AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A measuring method for determining values of viscosity coefficients of a liquid crystal ~~by fitting Ericksen-Leslie theoretical values to measured response characteristics~~, the measuring method comprising the steps of:

measuring ON electro-optical response characteristics of a liquid crystal cell with homogeneous alignment when a voltage applied to the cell switches from low to high;

determining a value of a rotational viscosity coefficient γ_1 from the measured ON response characteristics;

measuring OFF electro-optical response characteristics of the liquid crystal cell when the voltage applied to the cell switches from high to low; and

determining values of Miesovicz shear viscosity coefficients η_1 and η_2 from the measured OFF response characteristics.

2. (currently amended) A measuring device for determining values of viscosity coefficients of a liquid crystal ~~by fitting Ericksen-Leslie theoretical values to measured response characteristics~~, the measuring device comprising:

a light source illuminating a liquid crystal cell;

a voltage supply ~~capable of~~ switching a voltage ~~to be~~ applied to the liquid crystal cell between high and low levels;

a transmittance measuring unit ~~capable of~~ collecting transmittance data for light originating from the light source and passing through the liquid crystal cell, at intervals of 100 μs or less, from [[the]] a switching point at <u>which</u> the voltage supply <u>switches between the high and low levels</u>; and

an arithmetic unit for determining a value of [[the]] a rotational viscosity coefficient γ_1 by fitting [[the]] theoretical values calculated on varying $\gamma_{1[[,]]}$ to data collected by the transmittance measuring unit when the voltage supply is switched to the high level[[;]], and for determining values of [[the]] Miesovicz shear viscosity coefficients η_1 and η_2 by fitting the theoretical values calculated on varying η_1 and $\eta_{2,}$ while γ_1 is fixed at the value previously determined, to data collected by the transmittance measuring unit when the voltage supply is switched to the low level.

3. (new) The method of claim 1, wherein the ON and OFF response characteristics include a change in a transmittance of the liquid crystal over time from when the voltage switches.